

### **DETAILED ACTION**

1. This is a response to an amendment/response filed on 08/31/2010.
2. Claims 8-14 have been amended.
3. Claims 8-14 remain pending in the application.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 8-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney et al. (US 2006/0239363 A1) in view of Heath et al. (US 6985455 B1).

As per claim 8, Blakeney discloses a communication apparatus that transmits a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30), the communication apparatus comprising:

a transmitting section (see figure 2, mobile station 30) that, after having received a response to a link establishment request from the one receiving side communication apparatus (see paragraph 63, lines 1-10 mobile station provides an origination message indicative of a service configuration requested, see paragraph 64, lines 1-10, base station receives and determines whether to accept, see paragraph 66, lines 1-20, mobile station determines whether the request was accepted), transmits information data matching the link establishment request using a link established by the link establishment request (see paragraph 64, lines 1-10, base station receives and determines whether to accept, see paragraph 66, lines 1-20, mobile station determines whether the request was accepted); and

a requesting section (see figure 2, mobile station 30) that establishes a link (see paragraph 63, lines 1-10 mobile station provides an origination message indicative of a service configuration requested, see paragraph 64, lines 1-10, base station receives and determines whether to accept, see paragraph 66, lines 1-20, mobile station determines whether the request was accepted),

and transmits a link establishment request for transmission of next information data before termination of a link for transmitting current information data (see paragraph 16, lines 1-15, first communication device requests a change of service configuration without terminating the current traffic channel connection), the current information data and the next information data having been originally continuous (see paragraph 13, lines 7-11, changing of service configuration without dropping the traffic channel connection such as providing additional service or completion of a service in a multiple service traffic channel connection and a change in rate compatibility or due to change in communication environment or logistics (i.e. change in rate of existing connection), see paragraph 72, lines 1-10, user enabled to change data rate due to logistics or other factors).

Blakeney does not expressly disclose a requesting section that establishes a next link when the information data is transmitted by transmitting a next link establishment request to the one receiving side communication apparatus and transmits the next link establishment request for transmission of next information data before termination of the link for transmitting current information data.

Heath discloses a requesting section that establishes a next link (see column 11, lines 40-42, changes are necessary when ST makes request and is moved to a new channel) when the information data is transmitted by transmitting a next link establishment request to the one receiving side communication apparatus (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots) and transmits the next link establishment request for transmission of next information data before termination of the link for transmitting current information data (see column 17, lines 51-67 – column 18, lines 1-15, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots).

Heath also discloses the current information data and the next information data having been originally continuous (see column 1, lines 47-50, user terminals requesting to send a file, see column 12, lines 45-55, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation using a requesting section that establishes a next link (see column 11, lines 40-42, changes are necessary when ST makes request and is moved to a new channel, when the information data is transmitted by transmitting a next link establishment request to the one receiving side communication apparatus (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots) as a modification in Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

As per claim 9, Blakeney does not expressly disclose the requesting section transmits the next link establishment request for the transmission of the next information data immediately after the current information data has been transmitted.

Heath discloses the requesting section transmits the next link establishment request for the transmission of the next information data immediately after the current information data has been transmitted (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation using the requesting section transmits the next link establishment request for the transmission of the next information data immediately after the current information data has been transmitted (see column 11, lines 40-42, changes are necessary when ST makes request and is moved to a new channel, when the information data is transmitted by transmitting a next link establishment request to the one receiving side communication apparatus (see column

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12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots) as a modification in Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

As per claim 10, Blakeney discloses disclose the transmitting section multiplexing the current information data and the link establishment request for the transmission of the next information data (see figure 2, mux 48, data from service negotiator vocoder, mode, fax).

Blakeney does not expressly disclose multiplexing the current information data and the next link establishment request.

Heath discloses multiplexing the current information data and the next link establishment request (see column 12, lines 35-55, volume requests indicating number

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of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation wherein multiplexing the current information data and the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)) as a modification in Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one



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receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

As per claim 11, Blakeney discloses the transmitting section multiplexes the link establishment data and the information data by using at least one of frequency division multiplexing, time division multiplexing, and code division multiplexing (see paragraph 5, lines 1-5, code division multiple access).

Blakeney does not expressly disclose multiplexing the current information data and the next link establishment request.

Heath discloses multiplexing the current information data and the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation wherein multiplexing the current information data and the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)) as a modification in Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

As per claim 12, Blakeney discloses the requesting section transmits the link establishment request by full duplex communication which simultaneously performs

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transmission and reception (see paragraph 32, service option can be a two way in which case it can be supported on the forward and reverse channels simultaneously).

Blakeney does not expressly disclose transmitting the next link establishment request.

Heath discloses transmitting the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation wherein transmitting the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send,

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it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)) as a modification in Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

As per claim 13, Blakeney discloses the requesting section transmits the link establishment request by bi-directional simultaneous transmission using divisional multiple access (see paragraph 32, service option can be a two way in which case it can be supported on the forward and reverse channels simultaneously, see paragraph 5, lines 1-5, code division multiple access).

Blakeney does not expressly disclose transmitting the next link establishment request.

Heath discloses transmitting the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last

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allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation wherein transmitting the next link establishment request (see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots (i.e. time slot multiple access)) as a modification in Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

As per claim 14, Blakeney discloses communication method for transmitting a plurality of items of information data each containing a predetermined amount of information from a transmitting side communication apparatus to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30), the communication method comprising the steps of:

in the transmitting side communication apparatus (see figure 2, mobile station 30), transmitting a first link establishment request for transmission of current information data to the one receiving side communication apparatus (see paragraph 63, lines 1-10 mobile station provides an origination message indicative of a service configuration requested);

in the transmitting side communication apparatus (see figure 2, mobile station 30), after having received a response to the first link establishment request from the one receiving side communication apparatus (see paragraph 63, lines 1-10 mobile station provides an origination message indicative of a service configuration requested, see paragraph 64, lines 1-10, base station receives and determines whether to accept, see paragraph 66, lines 1-20, mobile station determines whether the request was accepted), transmitting the current information data to the one receiving side communication apparatus using a link established by the first link establishment request (see paragraph 63, lines 1-10 mobile station provides an origination message indicative of a service configuration requested, see paragraph 64, lines 1-10, base station receives and determines whether to accept, see paragraph 66, lines 1-20, mobile station determines whether the request was accepted);

and transmitting a second link establishment request for transmission of next information data before termination of a link for transmitting the current information data (see paragraph 16, lines 1-15, first communication device requests a change of service configuration without terminating the current traffic channel connection), the current information data and the next information data having been originally continuous (see paragraph 13, lines 7-11, changing of service configuration without dropping the traffic channel connection such as providing additional service or completion of a service in a multiple service traffic channel connection and a change in rate compatibility or due to change in communication environment or logistics (i.e. change in rate of existing connection), see paragraph 72, lines 1-10, user enabled to change data rate due to logistics or other factors).

Blakeney does not expressly disclose transmitting a second link establishment request for transmission of next information data before termination of the link for transmitting the current information data.

Heath discloses transmitting a second link establishment request for transmission of next information data before termination of the link for transmitting the current information data (see column 11, lines 40-42, changes are necessary when ST makes request and is moved to a new channel, see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to

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send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots).

Heath also discloses the current information data and the next information data having been originally continuous (see column 1, lines 47-50, user terminals requesting to send a file, see column 12, lines 45-55, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time).

Blakeney and Heath are analogous art since they are from the same field of endeavor of channel allocation in communication systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Heath's technique of channel allocation using transmitting a second link establishment request for transmission of next information data before termination of the link for transmitting the current information data (see column 11, lines 40-42, changes are necessary when ST makes request and is moved to a new channel, see column 12, lines 35-55, volume requests indicating number of uplink slots ST requires, an ST can volume requests to send large amounts of data on the uplink and by using follow-up request almost continuously send data for a long period of time, a follow-up request is made by using slot allocation of previous request, see column 18, lines 1-5, ST has more packets to send the ST sends another volume request, when ST receives last allocation of a request and it has more packets to send, it uses one of the slots in the allocation to send a follow-up request for additional slots) as a modification in



Blakeney's method and apparatus for transmitting a plurality of items of information data each containing a predetermined amount of information to one receiving side communication apparatus (see figure 2, base station 10 and mobile station 30).

The motivation to combine would have been to have a method and apparatus for efficiently processing bandwidth allocations by allocating transmission slots in response to request and moving the request from a global queue to a one of a plurality of local queues corresponding to channels (see column 2, lines 35-40, Heath).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form 892.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULLAH RIYAMI whose telephone number is (571)270-3119. The examiner can normally be reached on Monday through Thursday 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/  
Supervisory Patent Examiner, Art Unit 2474

/Abdullah Riyami/  
Examiner, Art Unit 2474